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(54) TITLE OF THE INVENTION

Fuel cell system

<Abstract>

The present invention provides a fuel cell system that can realize a compact structure and a stability of operation and improve energy efficiency of a whole system, by reducing energy for humidifying gas supplied to a fuel cell. The fuel cell system includes a humidifying device 21a for humidifying air supplied to a fuel cell 11, and an initial humidifying device 22 for humidifying beforehand the air that will be supplied to the fuel cell using air exhausted from the fuel cell 11 that is provided at a supplied air passageway and upstream of the humidifying device 21a. Heat of cooling water that has absorbed heat generated during a generation operation of the fuel cell 11 is radiated in a cooling water heat radiator 13. In addition, the heat is used for heating water circulating a passageway 15, and the heated water is stored in a tank 45.